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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/744,393	03/05/2001	Samuel W. D. Steel	36-1553	5720
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NIXON & VANDERHYE, PC . 1100 N GLEBE ROAD 8TH FLOOR ARLINGTON, VA 22201-4714				
			EXAMINER LE, MIRANDA	
			ART UNIT 2177	PAPER NUMBER 13

DATE MAILED: 01/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No.

09/744,393

Applicant(s)

STEEL ET AL.

Examiner

Miranda Le

Art Unit

2177

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 19 December 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY** [check either a) or b)]

- a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.
- b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
  - (b) ☐ they raise the issue of new matter (see Note below);
  - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
  - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.


NOTE: \_\_\_\_\_


3. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: None.Claim(s) objected to: None.Claim(s) rejected: 2-5 and 7-19.Claim(s) withdrawn from consideration: None.

8. ☐ The drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.
10. ☐ Other: \_\_\_\_\_

  
GRETA ROBINSON  
PRIMARY EXAMINER

  
Miranda Le  
January 18, 2004

Continuation of 5. does NOT place the application in condition for allowance because: Applicant's arguments do not overcome the final rejection.

Applicant's arguments filed 12/19/2003 have been fully considered but they are not persuasive.

Applicant argues:

- (a) The Finality of the Office Action is improper.
- (b) Brown does not teach the step of generating an index entry for a record in a semi-structured database as claimed in claim 2.
- (c) Brown does not search within a semi-structured database. Brown does not search within inputs requests comprising natural language phrases and parse those requests so as to determine the parts of speech for the input phrase. Brown neither describes a slot filter nor a query constructor as claimed in claim 11.
- (d) Absent the hindsight of the present application, there would have been no reason for those skilled in the art to combine the references.

The Examiner respectfully disagrees for the following reasons:

Per (a), after reconsideration for the Applicant's Request for Reconsideration, it was deemed that the scope of the claim as amended in Amendment A filed on 08/27/2003 has been changed. The limitations of both claim 1 and claim 2 as amended must be considered as one entity rather than separately. Therefore, it was reasonable and valid for a new ground of rejection. The new scope of the amended claims warranted the new ground of rejection as communicated in the Final office action filed 10/24/2003.

Per (b), with regards to claim 2, Brown teaches the step of generating index entry at col. 12, lines 22-41, that is, a term set weight may be assigned to each index entry during the creation of an index of database (see Fig. 9, a list of index entries (i.e. B230, B626, C616 ...). It is noted "the present invention is not limited to using the Soundex function to convert element of the input search data to terms. Other string matching and reduction functions may be used which condense representations of input search data elements into terms having a finite set" (Brown, col. 19, lines 44-48).

Moreover, as shown in Fig. 8, the DATABASE 60 comprises three fields: ENTRY, W, and TERM SET which correspond to index 61, wherein the ENTRY and W are the specific fields, and TERM SET is the free text field (col. 11, lines 1-14). This structure is similar to the semi-structured database as described in Applicant's specification, page 2, lines 1-5, that is a semi-structured database is a database in which some of the data within the database is stored in specific fields which denote the type of data whereas the remainder of the data will simply be stored under, a general field, such as a free text field. In addition, pursuant to Applicant's specification (page 12, lines 21-27), in the case of Yellow Pages directory, each item 40 will generally comprise an individual advert, such as the advert shown in Fig. 2A. This typically includes a name field 41 including a name entry 42 and a free text field 43 including a free text entry 44, an address entry 45 and a telephone number entry 46. Similarly, Brown discloses block 5873 in database 60 being "an individual advert" as shown in Fig. 8, that is:

"THE BEST BERGER CORPORATION (corresponds to a name field 41 including a name entry 42 )  
1298 FIRST AVENUE BOSTON MASSACHUSETTS (corresponds a free text field 43 including free text entry 44, an address entry 45 )  
02110 617-123-4567 (corresponds to a telephone number entry 46)".

Therefore, the claimed step of generating an index entry for a record in a semi-structured database reads on these cited portions of Brown.

Per (c), with regards to claim 11, firstly, in response to Applicant's arguments that "Brown does not search within a semi-structured database", the same reasoning by the Examiner is applicable to this argument can be found in the previous paragraph (a).

Secondly, it is brought to Applicant's attention that as stated in Abstract "input search data is matched against an index of a database to determine database records which either closely (i.e. free text entry) or exactly (i.e. predetermined format) match the input search data. The input search data is broken down into elements, and elements are converted to terms having a finite set of possible values. Also, Fig. 7, steps 30-33 clearly shows Brown does search within inputs requests comprising natural language phrases and parse those requests so as to determine the parts of speech for the input phrase. It is noted Brown discloses that "the actual content of a database is not limited to names or address. Document database containing large text files, documents, or even entire books may be indexed and searched according to the invention (col. 19, lines 38-42).

Thirdly, Brown teaches "a slot filter arranged to identify one or more objects" at col. 11, lines 38-61. As shown in Fig. 8, the entry B26 identifies one or more free text 1234, 2208, 3972, 5873; also in Fig. 7, steps 32 and 34 provide the ability to allocate components of the parsed request to a slot and filler request (col. 17, lines 11-29).

Fourthly, Brown teaches a query constructor at col. 17, lines 53-62. It should be noted that the "term set" is converted from the input search elements. This satisfies the "query construction" in the claim 11 limitations above. Furthermore, Brown also discloses the query constructor at col. 9, lines 51-65 as the user enter "The Best Berger Corporation" which is converted to the term set of three elements "Best", "Burger" and "Corporation" (col. 10, lines 39-51).

Therefore, the claim language as presented is still read on by the Brown reference at the cited paragraph in the claim rejections. Arguments as raised are moot since all claim limitations relevant to this issue have been addressed accordingly.

Per (d), in response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper.

See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case, the judgment on obviousness only takes into account an amount of knowledge, which was within the level of ordinary skill at the time the claimed invention was made. As discussed in the preceding paragraph, the claimed generating an index entry for a record in a semi structured database is analogous to Brown's teaching of matching input search data against an index of database to determine database records which either closely or exactly match the input search data to provide a fast and efficient way of accurately searching for data in extremely large databases, while not requiring precise input search data entry. Furthermore, the claimed limitation is even more apparent to the ordinary skilled artisan when de Hita's teaching are combined with Brown's since de Hita complements the latter reference in creating a database index having one or more content-based database keywords of the language-based database. Consequently, the reconstruction of the claimed invention is properly derived from the combination of the references.

Accordingly, the claimed invention as represented in the claims does not represent a patentable over the art of record.